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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,844	03/22/2004	Takashi Izuta	P/1596-77	2467
2352	7590	12/06/2006	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			DHINGRA, RAKESH KUMAR	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,844

Applicant(s)

IZUTA, TAKASHI

Examiner

Rakesh K. Dhingra

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/3/06 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 9-16 have been considered but are moot in view of the new ground(s) of rejection as explained hereunder.

Applicant has amended independent claim 9 by adding new limitations like "stores the heated treating solution" and "without the substrates".

Reference by Kuroda et al (2002/0153098) reads on claim 9 limitations. Applicant's argument that Kuroda does not teach a heated treating solution as claimed is not found persuasive since controller in Kuroda has the structural capability to keep the substrate holding device on standby without substrates, in the treating solution, before treatment of substrates. Claim limitations regarding use of heated treating solution and preheating during standby are intended use limitations which can not be given patentable weight, since Kuroda's apparatus teaches structural limitations of the claim. Further, the claim limitation "controller stores heat treating solution" is indefinite as explained below (see "Claims rejections under 35 USC 112") since disclosure does not teach any such limitation" in the invention. Accordingly claims 9-12 have been rejected under 35 USC 102 (b) as explained below. Further, Claim 13 has also been rejected under 35 USC 103 (a) as being unpatentable over Kuroda et al in view of Yoo (US Patent No. 6,207,932) as explained below. Remaining dependent claims 14-16 have also been rejected under 35 USC 103 (a) as explained below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

a) Claims 9, 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9, 13 are indefinite because the claims are directed to an apparatus and includes limitations related to methods of using the apparatus “treating tank that stores heated treating solution. The claim is not clear if the heated treating solution stored in the treating tank, is sealed in the treating tank as a part of the substrate treating apparatus or is re-circulated in the treating tank.

As a result of the combination of two separate statutory classes of invention, a manufacturer or seller of the claimed apparatus would not know from the claim whether it might also be liable for contributory infringement because a buyer or user of the apparatus later performs the claimed method of using the apparatus. Thus, such a claim is not sufficiently precise to provide competitors with an accurate determination of the metes and bounds of protection involved. (See *IPXL Holdings LLC v. Amazon.com Inc.* 77 USPQ2D 1140).

Claims 10-12 and 14-16 are also rejected being dependent claims.

b) Claim 9 is also indefinite because the limitation “a controller that stores the heated treating solution” is not clear if the controller has any function in storing the heated treating solution in the treating tank, which does not appear likely, since such limitation is not disclosed. Thus this part of claim limitation is not given any patentability weight. Applicant is invited to clarify and if this limitation is to be given patentable weight, applicant is invited to show its disclosure, otherwise examiner may consider to show this as new matter in the next office action.

Claims 10-12 are also rejected being dependent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al (US PG PUB No. 2002/0153098).

Regarding Claim 9: Kuroda et al teach a substrate treating apparatus (Figures 5-14) for performing a predetermined treatment of a plurality of substrates as immersed in a solution, comprising:

a treating tank 30 that stores the treating solution;

a transferring apparatus 15 (substrate transport mechanism) comprising of left/right wafer chucks 20a, 20b and transferring/driving means 21, that transports the plurality of substrates;

a wafer guide 31 (substrate holding device) that holds the substrates received from said substrate transport mechanism and immerses the substrates in the treating solution

stored in said treating tank; and

a control means 60 as per Figure 5 (controller) which that stores the treating solution in said treating tank, and keeps said wafer guide 21 (substrate holding device), without the substrates W, on standby in the same treating solution stored in said treating tank 30 and when the plurality of substrates W are transported by said substrate transport mechanism to said treating tank, raises said wafer guide 21 from said treating tank 30 to receive the plurality of substrates W from said substrate transport mechanism, and lowers said wafer guide 21 having received the plurality of substrates to immerse the

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substrates W in the treating solution in the treating tank, thereby to treat the substrates (paragraphs 0040-0042, 0052-0062, 0065-0080).

Kuroda et al do not specifically teach that the treating tank stores the heated treating solution, which is an intended use limitation. Further, Kuroda et al also do not teach explicitly the claim limitation, "controller keeps said substrate holding device -----to preheat said substrate holding device". As per teaching of Kuroda et al, the controller (control means 60) is structurally capable of keeping the wafer guide 21 (substrate holding device) on standby, without the substrates in the treating solution (Figure 6 and paragraphs 000066-0068), and the limitation "to preheat" is an intended use limitation. Since the prior art apparatus meets the structural limitations of the claim, the apparatus of prior art is considered capable of meeting the intended use limitations pertaining to "heated treating solution" and "to preheat the substrate holding device".

Regarding Claims 10, 11: Kuroda et al teaches all structural limitations of the claims. The recited limitations regarding use of phosphoric acid and sulfuric acid as treating solutions, are intended use limitations. Since the prior art apparatus meets all the structural limitations of the claims, the apparatus of prior art is capable of meeting these limitations, absent any criticality disclosed.

Regarding Claim 12: Kuroda et al teaches all structural limitations of the claim. The recited limitation regarding use of apparatus for etching treatment is an intended use limitation. Since the prior art apparatus meets all the functional limitations of the claims, the apparatus of prior art is capable of meeting these limitations, absent any criticality disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

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was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al (US PG PUB No. 2002/0153098) in view of Yoo (US Patent No. 6,207,932).

Regarding Claim 13: Kuroda et al teach all limitations of the claim (as explained above under claim 9) and further teach the wafer guide 21 (substrate holding device) includes a plurality of rods (parallel holding members 43a, 43b, 43c) for holding plurality of substrates W in a vertical posture and a support body (back plate) 45 that supports the rods 43a-c in a cantilever fashion (Figure 4 and paragraphs 0046, 0047).

Kuroda et al do not teach back plate having a heating device and a controller that preheats the back plate by means of heating device before treatment of substrates.

Yoo teaches a substrate treatment apparatus (Figure 5) that includes a wafer support 202 (like a back plate) that has heaters 206. Yoo also teaches a controller 201 that controls the operation such that wafer support 202 is preheated before treatment of substrates 110 (column 3, line 40 to column 4, line 35).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a wafer support (back plate) with heater, and a controller as taught by Yoo in the apparatus of Kuroda et al to enable pre-heat the back plate for achieving proper temperature during the wafer treatment process.

Regarding Claims 14,15: Kuroda et al teaches all structural limitations of the claims. The recited limitations regarding use of phosphoric acid and sulfuric acid as treating solutions, are functional limitations. Since the prior art apparatus meets all the functional limitations of the claims, the apparatus of prior art is capable of meeting these limitations, absent any criticality disclosed.

Regarding Claim 16: Kuroda et al teaches all structural limitations of the claims. The recited limitations regarding use of apparatus for etching treatment is an intended use limitation. Since the prior

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art apparatus meets all the functional limitations of the claims, the apparatus of prior art is capable of meeting these limitations, absent any criticality disclosed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh K. Dhingra whose telephone number is (571)-272-5959. The examiner can normally be reached on 8:30 -6:00 (Monday - Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571)-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rakesh Dhingra



Parviz Hassanzadeh
Supervisory Patent
Examiner Art Unit 1763